

Table S10. Relative abundance of KEGG orthologous groups (KOs) in Western diet associated pathways (% of KO assignments).											
Phosphotransferase system (PTS)	Donor	LF1dpc	LF7dpc	LF28dpc	LF29dpc	LF35dpc	W1dpc	W7dpc	W28dpc	W29dpc	W35dpc
K00890 protein-N-p-phosphohistidine-sugar phosphotransferase	0.075	0.113	0.107	0.110	0.212	0.196	0.117	0.065	0.138	0.277	0.358
K02756 PTS system, beta-glucosides-specific IIB component	0.043	0.078	0.018	0.049	0.042	0.058	0.117	0.032	0.041	0.033	0.194
K02757 PTS system, beta-glucosides-specific IIC component	0.043	0.078	0.018	0.049	0.042	0.058	0.117	0.032	0.041	0.033	0.194
K02755 PTS system, beta-glucosides-specific IIA component	0.043	0.078	0.018	0.049	0.042	0.058	0.117	0.032	0.041	0.033	0.164
K02766 phosphotransferase system, enzyme I	0.064	0.095	0.036	0.073	0.095	0.035	0.044	0.011	0.055	0.133	0.061
K02770 PTS system, fructose-specific IIC component	0.021	0.078		0.012	0.042	0.035	0.059	0.022	0.048	0.067	0.123
K02769 PTS system, fructose-specific IIB component	0.021	0.078		0.012	0.042	0.023	0.044	0.032	0.041	0.078	0.112
K02775 PTS system, galactitol-specific IIC component	0.064	0.017	0.044	0.049	0.116		0.015	0.065	0.041	0.022	0.031
K02768 PTS system, fructose-specific IIA component	0.011	0.087	0.009	0.024	0.032	0.012	0.059	0.022	0.007	0.078	0.102
K02761 PTS system, cellobiose-specific IIC component		0.009	0.018	0.012	0.042	0.035	0.022		0.028	0.044	0.215
K02795 PTS system, mannose-specific IIC component	0.032	0.026			0.021	0.035	0.029		0.007	0.022	0.204
K02796 PTS system, mannose-specific IID component	0.021	0.026	0.018	0.037	0.032	0.058	0.037		0.034	0.011	0.092
K02794 PTS system, mannose-specific IIB component		0.035		0.037	0.011		0.029	0.011	0.007	0.055	0.112
K02809 PTS system, sucrose-specific IIB component	0.011	0.026	0.009	0.024	0.011	0.069	0.029		0.028	0.022	0.051
K02810 PTS system, sucrose-specific IID component	0.011	0.026	0.009	0.024	0.011	0.069	0.029		0.028	0.022	0.051
K02803 PTS system, N-acetylglucosamine-specific IID component	0.032	0.026	0.009		0.011	0.035	0.007	0.011	0.028	0.022	0.061
K02804 PTS system, N-acetylglucosamine-specific IIC component	0.032	0.026	0.009		0.011	0.035	0.007	0.011	0.028	0.022	0.061
K02784 phosphocarrier protein HPr		0.043	0.009	0.012	0.032	0.023	0.022	0.011	0.028	0.011	0.031
K02790 PTS system, maltose and glucose-specific IIB component		0.017	0.018		0.032	0.023	0.022		0.021		0.061
K02791 PTS system, maltose and glucose-specific IIC component		0.017	0.018		0.032	0.023	0.022		0.021		0.061
K02818 PTS system, trehalose-specific IIB component	0.011		0.009	0.012	0.021	0.058	0.015		0.021	0.011	0.051
K02819 PTS system, trehalose-specific IIC component	0.011		0.009	0.012	0.021	0.058	0.015		0.021	0.011	0.051
K03475 PTS system, ascorbate-specific IIC component			0.024				0.029	0.022		0.022	0.112
K02787 PTS system, lactose-specific IIB component	0.011	0.087					0.044		0.011	0.010	
K02788 PTS system, lactose-specific IIC component	0.011	0.087					0.044		0.011	0.010	
K02746 PTS system, N-acetylgalactosamine-specific IIC component	0.011	0.026		0.012		0.012	0.022			0.022	0.061
K02778 PTS system, glucose-specific IIB component	0.021	0.009	0.036			0.035	0.007		0.014		0.020
K02779 PTS system, glucose-specific IIC component	0.021	0.009	0.036			0.035	0.007		0.014		0.020
K02798 PTS system, mannitol-specific IIA component		0.009	0.027						0.011	0.102	
K02747 PTS system, N-acetylgalactosamine-specific IID component		0.035	0.009		0.021		0.007			0.022	0.031
K02793 PTS system, mannose-specific IIA component	0.035		0.024						0.007	0.022	0.041
K02777 PTS system, glucose-specific IIA component	0.021	0.017	0.018			0.023	0.007		0.007		0.020
K02799 PTS system, mannitol-specific IIB component		0.009	0.018				0.007	0.011			0.061
K02800 PTS system, mannitol-specific IIC component		0.009	0.018				0.007	0.011			0.061
K02760 PTS system, cellobiose-specific IIB component			0.024	0.032					0.033	0.020	
K02783 PTS system, glucitol/sorbitol-specific IIC component							0.007			0.011	0.072
K02782 PTS system, glucitol/sorbitol-specific IIB component							0.007			0.011	0.061
K02808 PTS system, sucrose-specific IIA component	0.011	0.009	0.009	0.012			0.007		0.007		0.020
K02745 PTS system, N-acetylgalactosamine-specific IIB component		0.026			0.021				0.007	0.011	
K02759 PTS system, cellobiose-specific IIA component		0.009				0.007			0.014	0.022	0.010
K02749 PTS system, arbutin-like IIB component		0.009			0.032	0.012				0.011	
K02750 PTS system, arbutin-like IIC component		0.009			0.032	0.012				0.011	
K02802 PTS system, N-acetylglucosamine-specific IIA component		0.009							0.007	0.011	0.020
K02774 PTS system, galactitol-specific IIB component							0.007				0.031
K02744 PTS system, N-acetylgalactosamine-specific IIA component							0.022				
K02763 PTS system, D-glucosamine-specific IIA component	0.011					0.011			0.007		
K02764 PTS system, D-glucosamine-specific IIB component	0.011					0.011			0.007		
K02765 PTS system, D-glucosamine-specific IIC component	0.011					0.011			0.007		
K02822 PTS system, ascorbate-specific IIB component	0.011										0.020
K02806 PTS system, nitrogen regulatory IIA component		0.009					0.007			0.015	
K05881 PTS hybrid protein		0.009									
K02773 PTS system, galactitol-specific IIA component		0.009									
K02814 PTS system, sorbose-specific IIC component		0.009									
K02815 PTS system, sorbose-specific IID component							0.012				0.010
K02817 PTS system, trehalose-specific IIA component											0.011
K02821 PTS system, ascorbate-specific IIA component									0.011		

ABC transporters	Donor	LF1dpc	LF7dpc	LF28dpc	LF29dpc	LF35dpc	W1dpc	W7dpc	W28dpc	W29dpc	W35dpc
K06147 ATP-binding cassette, subfamily B, bacterial	0.623	0.703	0.515	0.611	0.550	0.611	0.851	0.433	0.703	0.655	1.319
K02003	0.322	0.460	0.293	0.427	0.402	0.542	0.462	0.238	0.427	0.411	0.440
K02004	0.408	0.416	0.337	0.427	0.360	0.381	0.492	0.444	0.455	0.277	0.348
K02056 simple sugar transport system ATP-binding protein	0.129	0.286	0.169	0.415	0.370	0.369	0.264	0.173	0.393	0.355	0.378
K02031 peptide/nickel transport system ATP-binding protein	0.215	0.182	0.124	0.208	0.169	0.254	0.279	0.097	0.124	0.288	0.327
K02032 peptide/nickel transport system ATP-binding protein	0.129	0.165	0.115	0.183	0.138	0.208	0.235	0.130	0.179	0.222	0.286
K02057 simple sugar transport system permease protein	0.021	0.208	0.080	0.098	0.190	0.185	0.220	0.097	0.103	0.277	0.194
K09687 antibiotic transport system ATP-binding protein	0.075	0.174	0.071	0.098	0.265	0.277	0.088	0.054	0.241	0.078	0.184
K02006 cobalt/nickel transport system ATP-binding protein	0.107	0.191	0.115	0.085	0.201	0.138	0.183	0.054	0.124	0.133	0.256
K02034 peptide/nickel transport system permease protein	0.129	0.191	0.062	0.159	0.095	0.081	0.176	0.054	0.103	0.200	0.266
K02033 peptide/nickel transport system permease protein	0.075	0.174	0.080	0.122	0.159	0.127	0.095	0.032	0.124	0.255	0.204
K06148 ATP-binding cassette, subfamily C, bacterial	0.086	0.200	0.071	0.073	0.127	0.092	0.183	0.054	0.117	0.133	0.184
K02035 peptide/nickel transport system substrate-binding protein	0.054	0.148	0.098	0.037	0.095	0.081	0.183	0.043	0.158	0.122	0.266
K02052 spermidine/putrescine transport system ATP-binding protein	0.075	0.104	0.080	0.098	0.127	0.115	0.110	0.130	0.083	0.122	0.174
K02015 iron complex transport system permease protein	0.086	0.130	0.107	0.110	0.116	0.081	0.132	0.087	0.069	0.111	0.153
K02013 iron complex transport system ATP-binding protein	0.097	0.061	0.053	0.085	0.085	0.081	0.051	0.054	0.096	0.078	0.072
K02037 phosphate transport system permease protein	0.064	0.035	0.080	0.061	0.116	0.081	0.081	0.065	0.076	0.089	0.051
K02058 simple sugar transport system substrate-binding protein	0.043	0.087	0.044	0.098	0.095	0.081	0.059	0.032	0.062	0.122	0.092
K09686 antibiotic transport system permease protein	0.032	0.026	0.071	0.110	0.063	0.058	0.059	0.119	0.062	0.055	0.051
K02055 spermidine/putrescine transport system substrate-binding protein	0.054	0.035	0.044	0.061	0.053	0.069	0.088	0.087	0.041	0.055	0.072
K02040 phosphate transport system substrate-binding protein	0.075	0.052	0.036	0.073	0.053	0.058	0.088	0.022	0.034	0.067	0.031
K09810 lipoprotein-releasing system ATP-binding protein	0.021	0.052	0.018	0.037	0.074	0.035	0.044	0.054	0.069	0.089	0.072
K01997 branched-chain amino acid transport system permease protein	0.075	0.069	0.009	0.085	0.042	0.046	0.044	0.011	0.041	0.022	0.082
K02036 phosphate transport system ATP-binding protein	0.054	0.026	0.053	0.049	0.032	0.035	0.051	0.054	0.034	0.055	0.082
K02008 cobalt/nickel transport system permease protein	0.054	0.052	0.009	0.037	0.032	0.092	0.037	0.032	0.055	0.033	0.082
K02038 phosphate transport system permease protein	0.064	0.061	0.036	0.037	0.042	0.035	0.059	0.022	0.021	0.067	0.072
K02054 spermidine/putrescine transport system permease protein	0.032	0.069	0.036	0.037	0.074	0.012	0.066	0.076	0.048	0.033	0.010
K09812 cell division transport system ATP-binding protein	0.075	0.035	0.018	0.073	0.042	0.023	0.051	0.054	0.076	0.011	0.031
K01998 branched-chain amino acid transport system permease protein	0.097	0.026	0.018	0.037	0.053	0.023	0.044	0.054	0.041	0.022	0.051
K02051 sulfonate/nitrate/taurine transport system substrate-binding protein	0.043	0.018			0.063	0.046	0.051	0.043	0.055	0.100	0.041
K01995 branched-chain amino acid transport system ATP-binding protein	0.075	0.026	0.027		0.053	0.035	0.029	0.043	0.034	0.078	0.061
K02049 sulfonate/nitrate/taurine transport system ATP-binding protein	0.011	0.035	0.036	0.037	0.074	0.046	0.007	0.022	0.069	0.078	0.031
K02050 sulfonate/nitrate/taurine transport system permease protein	0.032	0.026	0.027	0.012	0.042	0.035	0.029	0.043	0.048	0.100	0.031
K02053 spermidine/putrescine transport system permease protein	0.011	0.061	0.027	0.037	0.032	0.046	0.073	0.032	0.021	0.022	0.041
K01996 branched-chain amino acid transport system ATP-binding protein	0.043	0.035		0.061	0.053	0.069	0.044		0.034	0.022	0.051
K02016 iron complex transport system substrate-binding protein	0.064	0.061	0.009		0.011	0.046	0.029	0.032	0.021	0.055	0.051
K02065 putative ABC transport system ATP-binding protein	0.075	0.009	0.071		0.011	0.035	0.037	0.032	0.034	0.044	0.020
K01999 branched-chain amino acid transport system substrate-binding protein	0.011	0.026	0.009	0.012	0.063	0.081	0.022	0.032	0.014	0.022	0.082
K09811 cell division transport system permease protein	0.032	0.009	0.053	0.012	0.053	0.023	0.037		0.048	0.044	0.031
K02066 putative ABC transport system permease protein	0.043	0.035	0.018	0.024		0.037	0.087	0.028			0.010
K02071 D-methionine transport system ATP-binding protein	0.054	0.043		0.012		0.035	0.044	0.022	0.028	0.033	0.061
K09816 zinc transport system permease protein	0.021	0.026	0.062		0.032	0.023	0.044	0.054	0.007	0.033	0.031
K02011 iron(III) transport system permease protein	0.032	0.009	0.044	0.024	0.021	0.023	0.015	0.032	0.028	0.044	0.061
K05847 osmoprotectant transport system ATP-binding protein	0.054	0.026	0.018	0.024	0.053	0.012	0.037	0.011	0.014		0.082
K05776 molybdate transport system ATP-binding protein	0.054		0.053	0.024	0.032	0.046	0.015	0.054	0.041		
K02018 molybdate transport system permease protein	0.021	0.035	0.009	0.024	0.032	0.012	0.007		0.028	0.011	0.041
K09691 lipopolysaccharide transport system ATP-binding protein	0.043	0.035		0.024	0.011		0.015	0.032	0.028		0.020
K02069 putative ABC transport system permease protein	0.032	0.017	0.009	0.024	0.011	0.012	0.022	0.011	0.007	0.022	0.041
K02073 D-methionine transport system substrate-binding protein		0.035	0.018		0.011		0.037			0.033	0.041
K09697 sodium transport system ATP-binding protein	0.032	0.017		0.012	0.021	0.023		0.032	0.014		0.031
K05845 osmoprotectant transport system substrate-binding protein	0.011				0.021		0.007	0.011	0.014	0.033	0.072
K02007 cobalt/nickel transport system permease protein	0.011	0.035	0.018	0.012	0.011	0.023		0.007	0.022	0.020	
K02010 iron(III) transport system ATP-binding protein		0.026	0.018			0.035	0.007	0.011		0.055	
K09815 zinc transport system substrate-binding protein		0.009	0.044		0.021				0.007	0.022	0.041
K09817 zinc transport system ATP-binding protein	0.021	0.009	0.036		0.011	0.012	0.022	0.032		0.028	0.010
K05813 sn-glycerol 3-phosphate transport system substrate-binding protein		0.009	0.018		0.011	0.035	0.015		0.028		0.010
K02002 glycine betaine/proline transport system substrate-binding protein	0.011	0.009	0.027	0.012		0.023	0.015	0.011	0.007	0.011	
K02012 iron(III) transport system substrate-binding protein				0.018	0.024	0.011	0.023	0.007	0.011	0.007	0.031

